

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT



WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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| Date of mailing (day/month/year) 29 DECEMBER 2004 (29.12.2004) | |
| Applicant's or agent's file reference PCT-050326 | FOR FURTHER ACTION See paragraph 2 below |
| International application No. PCT/KR2004/001303 | International filing date (day/month/year) 01 JUNE 2004 (01.06.2004) |
| Priority date(day/month/year) 26 MARCH 2004 (26.03.2004) | |
| International Patent Classification (IPC) or both national classification and IPC IPC7 A61K 7/40 | |
| Applicant AMOREPACIFIC CORPORATION et al | |

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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| Name and mailing address of the ISA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea | Authorized officer JUNG, Jin Wook |
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

international application No.

PCT/EP2004/001305

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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International application No.

PCT/JP2004/001305

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:
citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|--------|-----|
| Novelty (N) | Claims | 1 - 10 | YES |
| | Claims | None | NO |
| Inventive step (IS) | Claims | 1 - 10 | YES |
| | Claims | None | NO |
| Industrial applicability (IA) | Claims | 1 - 10 | YES |
| | Claims | None | NO |

2. Citations and explanations :

Reference is made to the following documents:

D1: KR 2003-64986 A

D2: US 2003/162725 A1

D3: KR 2004-9983 A

D4: US 6,277,396 B1

D5: US 6,437,004 B1

The present invention relates to a composition comprising an effective amount of Ginsenoside F1 and epigallocatechin-3-gallate for preventing skin damage.

D1 relates to a nanoemulsion comprising physiological active materials, such as epigallocatechin gallate and ginsenosides, using lipopeptide-based co-surfactant and a cosmetic composition containing the same.

D2 relates to a pharmaceutical composition comprising an effective amount of epigallocatechin gallate and ginseng root for treating obesity.

D3 relates to an extract, which is isolated from *Betula platyphylla* var. *japonica*, having the anti-oxidation effect and the anti-cancer activity.

D4 relates to a dietary supplement comprising the active ingredients such as epigallocatechins and ginseng root extracts.

D5 relates to a method for treatment of a skin damage using olive oil polyphenols.

1. Novelty

The subject matter of the present claims 1-10 is novel over the above D1-D5 and meets the criteria set out in PCT Article 33(2), because none of the prior art describes the composition comprising both Ginsenoside F1 and epigallocatechin-3-gallate for preventing skin damage recited in the present claims.

See Supplemental Box for the next parts.

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Box No. VII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

"An inhibitor of the dephosphorylation of Rb protein..." in claim 8 does not define the matter for which protection is sought clearly due to the functional expression.

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International application No.

PCT/JP2004/061363

Supplemental Box

In case the space in any of the preceding boxes is not sufficient,
Continuation of :

V.

2. Inventive step

The subject matter of the present claims 1-10 complies with PCT Article 33(3), since the prior art including the above D1-D5 does not teach or fairly suggest that the composition comprising both Ginsenoside F1 and epigallocatechin-3-gallate can remarkably prevent skin damage from UV-B by control of expressing Bcl-2 and Ern-3a; and remarkably prevent cell death from UV-B by inhibiting the dephosphorylation of Rb protein compared with the composition comprising Ginsenoside F1 or epigallocatechin-3-gallate.

3. Industrial applicability

Claims 1-10 also meet the criteria set out in PCT Article 33(4) and consequently, these claims are considered to be industrially applicable.